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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,680	06/01/2000	Daniel D. Downing	M-8779 US	5910
25226	7590	11/25/2003	EXAMINER	
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			HOFFMAN, BRANDON S	
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			2171	11

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,680

Applicant(s)

DOWNING, DANIEL

Examiner

Brandon Hoffman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-20 are pending in this office action, claims 16-20 are newly added.
2. Applicant's arguments filed October 28, 2003, have been fully considered but they are not persuasive.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1, 7, 9, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sako (EP 0 794 496 A1).

Regarding claims 1 and 20, Sako teaches a drive for reading and decoding data from an optical medium, comprising:

- A read head adapted to read data from the optical medium (col. 12, lines 33-37);
- A physical sector reader coupled to the read head (col. 13, lines 1-6);
- An ESM (eight-to-sixteen modulation) encoder coupled to an output terminal of the physical sector recorder (col. 13, lines 6-11);
- A recording frame reader having an input terminal coupled to an output terminal of the ESM encoder (col. 14, lines 11-15);

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- A decoding system having an input terminal coupled to an output terminal of the recording frame reader and adapted to invert at least one selected bit in at least one frame received from the recording frame reader (col. 13, lines 27-46);
- An error correction code reader having an input terminal coupled to an output terminal of the decoding system (col. 13, lines 11-15);
- A descrambler having an input terminal coupled to an output terminal of the error correction code reader (col. 13, lines 22-25); and
- A data frame decoder having an input terminal coupled to an output terminal of the descrambler (col. 13, lines 25 and 26).

Regarding claim 7, Sako teaches performing error checking and correction on the ECC block using the parity bytes prior to descrambling the scrambled data frames (col. 14, lines 7-35 and figures 17 (ref num 116), 19, and 20).

Regarding claims 9 and 19, Sako teaches a system for recording data on an optical medium, comprising:

- An input terminal for receiving main data (col. 4, lines 25-27);
- A framer having an input terminal coupled to the input terminal (col. 4, lines 27-31);
- A data frame encoding system having an input terminal coupled to an output terminal of the data framer and adapted to invert at least one selected bit in at least one of the data frames received from the framer (col. 5, lines 7-24);

- A scrambler having an input terminal coupled to an output terminal of the encoding system (col. 4, lines 31-37);
- An error correction code generator having an input terminal coupled to an output terminal of the scrambler (col. 4, lines 41-43);
- An error correction code encoding system having an input terminal coupled to an output terminal of the error correction code generator (col. 4, lines 37-41);
- A recording frame generator having an input terminal coupled to an output terminal of the error correction code encoding system (col. 8, lines 23-33);
- An ESM (eight-to-sixteen modulation) encoder having its input terminal coupled to an output terminal of the recording frame generator (col. 4, lines 43-47);
- A physical sector generator having an input terminal coupled to an output terminal of the ESM encoder (col. 4, lines 47-53); and
- A write head coupled to an output terminal of the physical sector generator, thereby to record on the optical medium (col. 4, lines 54-58).

Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Blixt (WO 98/52194 A1).

Regarding claim 18, Blixt teaches an optical medium on which is recorded information comprising:

- An identification field (page 6, lines 29-36);
- An identification error detection field (page 7, lines 10-12);
- A main data field (figure 2A, reference number 206); and

- An error detection code field (figure 2A, reference number 214);
- Wherein the fields are in a data frame, and at least one selected bit in the data frame is inverted so as to have an incorrect or invalid value according to a predetermined ECMA standard (page 7, line 29 through page 8, line 2).

Claim Rejections - 35 USC § 103

5. Claims 2-6, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako as applied to claims 1 and 9 above, in view of Blixt (WO 98/52194 A1).

Regarding claims 2-6 and 11-15, Sako discloses all of the claimed subject matter as set forth above in the rejection of claims 1 and 9, respectively, except for altering some of the bits in the synchronization and header sections of an optical disk. Blixt teaches altering at least some bits in the synchronization and header sections of an optical disk.

One with ordinary skill in the art, at the time the invention was made, would have altered some of the bits in the synchronization and header sections of an optical disk in Sako as suggested by Blixt. One with ordinary skill in the art would have altered some bits in the synchronization and header sections of an optical disk because altering those bits would allow certain portions of the CD-ROM to become difficult or impossible to read (see page 7, line 29- page 8, line 2 of Blixt).

Regarding claim 2 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit of each encoded data frame to generate the data frames comprises inverting at least one selected bit of a sector number of each encoded data frame (see figure 2A and pg. 6, lines 29-36 of Blixt).

Regarding claim 3 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit of each encoded data frame to generate the data frames comprises inverting at least one selected bit of a sector information field of each encoded data frame (see figure 2A and pg. 6, lines 29-36 of Blixt).

Regarding claim 4 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit of each encoded data frame to generate the data frames comprises inverting at least one selected bit of a ID Error Detection Code Field of each encoded data frame (see figure 2A and pg. 7, lines 10-12 of Blixt).

Regarding claim 5 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit of each encoded data frame to generate the data frames comprises inverting at least one selected bit of an Error Detection Code field of each encoded data frame (see figure 2A and pg. 7, lines 15-18 of Blixt).

Regarding claim 6 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit of each encoded data frame to generate the data

frames comprises inverting at least one selected bit of a data field of each encoded data frame (see figure 2A and pg. 7, lines 6-8 of Blix).

Regarding claim 11 specifically, Sako as modified by Blix teaches wherein:
inverting at least one selected bit in at least one of the data frame values comprises
inverting at least one selected bit of a sector number value (see figure 2A and pg. 6,
lines 29-36 of Blix).

Regarding claim 12 specifically, Sako as modified by Blix teaches wherein:
inverting at least one selected bit in at least one of the data frame values comprises
inverting at least one selected bit of a sector information field (see figure 2A and pg. 6,
lines 29-36 of Blix).

Regarding claim 13 specifically, Sako as modified by Blix teaches wherein:
inverting at least one selected bit in at least one of the data frame values comprises
inverting at least one selected bit of a ID Error Detection Code field (see figure 2A and
pg. 7, lines 10-12 of Blix).

Regarding claim 14 specifically, Sako as modified by Blix teaches wherein:
inverting at least one selected bit in at least one of the data frame values comprises
inverting at least one selected bit of an Error Detection Code field (see figure 2A and pg.
7, lines 15-18 of Blix).

Regarding claim 15 specifically, Sako as modified by Blixt teaches wherein:
inverting at least one selected bit in at least one of the data frame values comprises
inverting at least one selected bit of a data field (see figure 2A and pg. 7, lines 6-8 of
Blixt).

Regarding claims 16 and 17, Sako teaches all the limitations of claims 1 and 9,
respectively. However, Sako does not teach the data has an incorrect or invalid value
according to a predetermined ECMA standard.

Regarding claim 16, specifically, Blixt teaches prior to the inverting, the data has
an incorrect or invalid value according to a predetermined ECMA standard (page 6, line
29 through page 7, line 5). The reason the data is incorrect *prior to inverting* is because
the data is being read from the optical medium, therefore the data has already had the
alterations performed.

Regarding claim 17, specifically, Blixt teaches the recorded physical sectors have
an incorrect or invalid value according to a predetermined ECMA standard (page 6, line
29 through page 7, line 5).

It would have been obvious to one of ordinary skill in the art, at the time the
invention was made, to have incorrect or invalid values according to a predetermined
ECMA standard, as taught by Blixt, with the method of Sako. It would have been

obvious to have incorrect or invalid values according to a predetermined ECMA standard, as taught by Blixt, with the method of Sako because the incorrect or invalid values correlate to copy prevention (see page 7, line 29- page 8, line 2 of Blixt).

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako as applied to claims 1 and 9 above, in view of Iwasaki (U.S. Patent No. 5,854,778).

Regarding claim 8, Sako teaches all of the claimed subject matter as set forth above in the rejection of claim 1, except for deriving NRZI-encoded pulses from the optical medium and decoding the NRZI-encoded pulses by an NRZI decoder to generate the channel bits. Iwasaki teaches deriving NRZI-encoded pulses from the optical medium and decoding the NRZI-encoded pulses by an NRZI decoder to generate the channel bits (figure 1, reference number 50).

One with ordinary skill in the art, at the time the invention was made, would have derived NRZI-encoded pulses from the optical medium and decoded the NRZI-encoded pulses by an NRZI decoder to generate the channel bits in Sako as suggested by Iwasaki. One with ordinary skill in the art would do that because the methods used in recording data to an optical medium are the same methods, in reverse order, as those used in reading data from an optical medium. More specifically, encoding the physical sectors by an NRZI encoder prior to recording data to an optical medium, as taught by

Iwasaki in column 9, lines 6-8, would be the reverse process of deriving NRZI-encoded pulses from an optical medium and decoding those pulses by an NRZI decoder to generate channel bits.

Regarding claim 10, Sako teaches all of the claimed subject matter as set forth above in the rejection of claim 9, except for encoding the physical sectors by an NRZI encoder prior to recording the physical sectors on the optical medium. Iwasaki teaches encoding the physical sectors by an NRZI encoder (figure 1, reference number 50) prior to recording the physical sectors on the optical medium (col. 9, lines 6-8).

One with ordinary skill in the art, at the time the invention was made, would have encoded physical sectors by an NRZI encoder prior to recording onto and optical medium in Sako as suggested by Iwasaki. One with ordinary skill in the art would do that because the DC level changes when recording based on track number, ID number, and sector number. The NRZI encoder adjusts the DC level based on combinations of track number, ID number, and sector number, thus affecting the recording process (col. 7, lines 1-21).

Response to Arguments

6. Applicant amends claims 1, 4, and 8-10, and adds claims 16-20.
7. Applicant Argues:

- a. Independent claims 1 and 9 are not taught by Sako to include "inverting at least one selected bit of each encoded data frame to generate a plurality of data frames" (page 10, paragraph 3)
- b. Blixt reference does not support "inverting at least one selected bit of each encoded data frame to generate a plurality of data frames" and (page 12, paragraph 2)
- c. Dependent claims 2-8 and 10-15 are allowable based upon their dependency on allowable claims 1 and 9 (page 11, last paragraph and page 13, paragraph 2).

Regarding argument (a), examiner disagrees with applicant. Sako discloses a ciphering scheme which utilizes a key as is well known in the art. Ciphering and deciphering, with the use of a key, inverts selected bits of a data stream. Although a user of the system does not know the exact bits that are inverted, the hardware performing the ciphering knows which bits to invert based on the key used. In other words, the ciphering scheme of Sako does disclose inverting at least one selected bit by the process of ciphering the "selected" bits from the discretion of the key. The optical reader, of claim 1, and the optical recorder, of claim 9, can choose a key to invert whichever bits deemed necessary, thus "inverting at least one selected bit of each encoded data frame to generate a plurality of data frames."

Regarding argument (b), examiner disagrees with applicant. The argument set forth for argument (a) combined with the disclosure of Blixt, teaches the limitations of claims 2-6 and 11-15.

Regarding argument (c), examiner disagrees with applicant. Based on the arguments set forth by the examiner for arguments (a) and (b), the dependent claims stand as rejected.

Conclusion

8. The supplemental information disclosure statement contains the wrong serial number. Correction was made on the cover sheet. Applicant should take note that the papers following the cover sheet are also incorrect, referring to serial number 09/568,680 instead of 09/586,680.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 703-305-4662. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Brandon Hoff

BH

November 19, 2003



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